

NISTTech

System & Method for Authenticating Users using Image Selection

Abstract

Authentication refers to a mechanism for verifying the claimed identity presented to a computing system. This document describes a general-purpose mechanism for authenticating users through the selection of a sequence of images from a displayed assembly of images. While specifically aimed at hand-held devices, this visual login technique is suitable for most computing platforms that require user authentication. The invention is based on the capability of computer systems to display and manipulate individual thumbnail images via a graphical user display interface. Authentication using image selection is not an entirely new idea. However, the technique invented is an innovative and extremely powerful approach that takes image sequences selected by a user and formulates a password that is dependent on both the sequence and style of their selection. Moreover, to ease the users' burden of complying with organizational policy to change over passwords after some period of time, the invention allows the same image sequence to be used repeatedly in a password change dialogue, yet generate a completely different password value each time. The invention also introduces a new way of "salting" passwords to make them less vulnerable to attack, which can be readily incorporated into the password derivation process described, as an alternative to currently used techniques. These aspects of the invention overcome a number of problems with knowledge-based authentication and provide a means to attain improved security for computing systems.

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Status of Availability

This technology is available in the public domain.

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